



THE STATE  
of ALASKA  
GOVERNOR SEAN PARNELL

Department of Natural Resources

Division of Oil & Gas  
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CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

March 27, 2013

Mark R. Landt  
Vice President, Land & Business Development  
Buccaneer Alaska, LLC  
952 Echo Lane, Suite 420  
Houston, Texas 77024

Re: Findings and Decision of the Director, Denial of the Application to Form the Kenai Loop  
Unit: Errata, page 19

Dear Mr. Landt:

The State of Alaska, Department of Natural Resources, Division of Oil and Gas (Division) issued the Findings and Decision of the Director, Denial of the Application to Form the Kenai Loop Unit on March 15, 2013.

The decision contained a printing error which omitted the first two lines on page 19. For the unit decision, please insert the following two lines on page 19 with the following:

The sentence begins on page 18:

*"Simply extending leases beyond their primary term in the absence of development commitments does not result in realization of the purposes of unitization or the"*

The sentence should continue onto page 19:

*"State oil and gas leasing program. Approval of the Application is not necessary or advisable in the public interest. The Application does not promote the public interest."*

The Division has issued this corrected decision titled, "Kenai Loop Unit, Corrected Denial of the Kenai Loop Unit Application, Findings and Decision of the Director, Division of Oil and Gas, Under Delegation of Authority from the Commissioner, Department of Natural Resources, State of Alaska, March 27, 2013". The appeal period will begin with the issuance of the corrected decision. The corrected decision is enclosed with this letter.

If you have questions regarding this decision, please do not hesitate to contact Alicia Dowdy at (907) 269-8799 or via email at [Alicia.Dowdy@alaska.gov](mailto:Alicia.Dowdy@alaska.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'W.C. Barron', with a stylized flourish at the end.

W.C. Barron  
Director

Enclosure

cc: DOL

KENAI LOOP UNIT

CORRECTED

DENIAL OF THE KENAI LOOP UNIT APPLICATION

FINDINGS AND DECISION OF THE DIRECTOR

DIVISION OF OIL AND GAS

UNDER DELEGATION OF AUTHORITY FROM THE COMMISSIONER

DEPARTMENT OF NATURAL RESOURCES

STATE OF ALASKA

MARCH 27, 2013

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## **I. INTRODUCTION AND DECISION SUMMARY.**

This is the decision of the Director of the State of Alaska (State) Department of Natural Resources (DNR), Division of Oil and Gas (Division) pursuant to a September 30, 1999 delegation of authority from the DNR Commissioner on the July 19, 2012, application of Buccaneer Alaska Operations, LLC (Buccaneer) to form the Kenai Loop Unit (KXU) out of leases issued by Cook Inlet Region, Incorporated (CIRI), Mental Health Land Trust (MHT), and the DNR. (Application). Buccaneer is the proposed KXU Operator and sole working interest owner (WIO) of the proposed unit area.

The request to form the unit is denied: (1) CIRI has notified the Division that it has terminated Buccaneer's interest in the CIRI lease proposed to be included in the unit<sup>1</sup>. Buccaneer has not notified the state of the lease termination, and it did not amend its Application to reflect the termination. The proposed unit agreement and other aspects of the Application are based on CIRI's agreement to unitization. (2) The Application is in effect an effort to extend the primary term of the leases for the purpose of conducting exploration activities rather than a proposal to effect efficient development of multiple leases. (3) The proposed unit plan is deficient because it is a simple assertion that Buccaneer will drill one to three uncharacterized wells a year at unspecified locations in the proposed unit.<sup>2</sup> (4) Formation of the KXU as proposed by Buccaneer is not in the public interest.

State lease ADL 391094 may be being drained by the Kenai Loop #1 well drilled on an MHT lease. ADL 391094 is extended by production until such time as the Division can issue a decision on the drainage issue.

## **II. HISTORY OF PROPOSED UNIT AREA.**

On July 19, 2012, Buccaneer submitted an application to the Division to approve formation of the KXU and simultaneously paid the \$5,000.00 unit formation application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(D), respectively. The Application included: the unit operating agreement; the multiple royalty ownership state unit agreement form including CIRI, the MHT, and the DNR as royalty owners; Exhibit A which is a map of the proposed unit; Exhibit B which is a description of the proposed unit area, its leases, and ownership interests; and Exhibit G which is an initial unit Plan of Development. Buccaneer is the only WIO. The Application also included confidential economic and technical data.

The Division notified Buccaneer by letter dated August 10, 2012, that the Application was incomplete. The initial Application did not include the following items required under 11 AAC 83.306: (1) the unit agreement executed by the proper parties, submitted on the most current

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<sup>1</sup> The State received notice on January 9, 2013, from Cook Inlet Region, Inc. (CIRI) that they had terminated their lease, C-061667, with Buccaneer.

<sup>2</sup> Development and drilling activities to date in the proposed unit area has been on MHT land. The development plan submitted with the Application does not indicate if and when development will occur on State land.

standard state unit agreement form for multiple royalty owners; (2) the executed unit operating agreement; (3) all pertinent geological, geophysical, engineering and well data, and interpretations of those data to support the application (11 AAC 83.306(4)). The Division deemed the Application complete on December 10, 2012.

The Division published a public notice in the "*Anchorage Daily News*", the "*Peninsula Clarion*", and the "*Homer News*" on December 13, 2012, under 11 AAC 83.311. Copies of the Application and the public notice were provided to interested parties. The Division provided public notice to, among others, the Alaska Department of Environmental Conservation, the Kenai Peninsula Borough, the City of Kenai, the Village of Tyonek, the Salamatof Native Association, Cook Inlet Region, Incorporated, the Soldotna Postmaster, and the radio station KDLL in Kenai. The notice was also published on the State of Alaska Public Notice website and the Division's website. The public notices invited interested parties and members of the public to submit comments by January 14, 2013.

The Division received comments regarding the Application from the Kachemak Bay Conservation Society (KBCS) and The Center for Water Advocacy (TCWA). The Division received both comments on January 14, 2012. The Division considered the comment in the evaluation of the Application and the issuance of this decision. Topics of concern related to potential environmental impacts from the formation of the unit and any oil and gas development in the State and Buccaneer as a company and operator. The comments included:

1. Objections to water use for oil and gas development by KBCS and TCWA;
2. Buccaneer lacks sufficient experience to manage the unit by KBCS;
3. Buccaneer lacks sufficient financial stability to qualify for a unit by KBCS;
4. Buccaneer takes a shotgun approach to permit applications by KBCS;
5. Adverse effects of oil development on the surrounding landscape by: KBCS; and
6. The state's "Drill Baby Drill" attitude towards oil development in the face of ocean acidification, climate change, and global warming, including reopening Drift River facility is reckless by KBCS.

Buccaneer began acquiring leases in the proposed unit area with two MHT leases in December 2010, the four State leases were acquired through assignments in January 2011, and a CIRI lease was acquired in February 2011. These seven leases cover approximately 7,499.64 acres. A map of the area proposed to be unitized is found in Attachment 1, details of the leases are found in Attachment 2, and the leases are summarized in Table 1.



**Table 1 – ADLs Proposed for Formation of Kenai Loop Unit**

Lease No.	Acres	Royalty	Lease Effective Date	WIO	Lease Expiration Date
MHT 9300082	1080	Confidential	2/1/2011	Buccaneer Alaska, LLC 100%	2/1/2016
MHT 9300070	3747.50	Confidential	1/11/2011	Buccaneer Alaska, LLC 100%	1/1/2016
C-061667	1275	Confidential	3/1/2011	Buccaneer Alaska, LLC 100%	3/1/2016
ADL 391094	750.37	12.5%	10/1/2007	Buccaneer Alaska, LLC 100%	9/30/2012
ADL 391092	186.77	12.5%	10/1/2007	Buccaneer Alaska, LLC 100%	9/30/2012
ADL 391091	160	12.5%	10/1/2007	Buccaneer Alaska, LLC 100%	9/30/2012
ADL 391095	300	12.5%	10/1/2007	Buccaneer Alaska, LLC 100%	9/30/2012
<i>Total Acreage 7,499.64</i>					

The primary term of CIRC lease C-061667 expires on March 1, 2016. For reasons undisclosed to the State, CIRC notified the State on January 9, 2013, that it terminated the lease effective January 9, 2013.

In 2011 Buccaneer drilled the Kenai Loop #1 well based on 2-D seismic data. The well was tested and found to be successful. Buccaneer drilled the Kenai Loop #3 well in August of 2011. It was not productive. The Alaska Oil and Gas Conservation Commission (AOGCC) issued a well spacing exception to allow Buccaneer to drill the Kenai Loop #4 well. It was completed in Fall 2012. Buccaneer has not provided the Division with data from Kenai Loop #4 well or indicated that it encountered hydrocarbons. Beginning in December 2011 and finishing in April 2012 Buccaneer successfully completed a 3-D seismic shoot of the proposed unit area.

Buccaneer completed the installation of the production facilities for the Kenai Loop #1 well on the Kenai Loop #1 pad and the City Gate pad in January 2012. Buccaneer has also secured gas sales contracts and is now selling the gas that is being produced. The City Gate facility is the point of custody transfer of Kenai Loop #1 well gas into the Kenai Nikiski Pipeline.

Buccaneer's unit formation application included the following initial Plan of Development (POD):

In the 1<sup>st</sup> Year:

1. Buccaneer agrees to drill 1-3 additional wells within the 1<sup>st</sup> year. The next well (Kenai Loop #4 well) will be drilled to the proposed depth of 11,000 true vertical depth (TVD) and will attempt to extend the Kenai Loop field from the Kenai Loop #1 well. The surface location is on the Kenai Loop #1 pad and the final bottom hole location will be determined after final processing and interpretation of the 3-D seismic survey.
2. Buccaneer will propose the initial Participating Area (PA) for the Tyonek formation to encompass the known producing interval in the Kenai Loop #1 well.

In the 2<sup>nd</sup> through 5<sup>th</sup> Year:

Buccaneer agrees to drill 1-3 wells per year to drill additional wells in the Kenai Loop Unit.

The Application does not describe the types of wells Buccaneer plans to drill or where in the proposed unit area the wells will be located. Regarding unit formation, the Application states:

“The proposed 7500 acre Buccaneer Kenai Loop project area is located on the northern Kenai Peninsula on a ridge between Cannery Loop Field (200BCFG) and Beaver Creek Gas Field (6MMBO, 250 BCFG) and has productive intervals and seismic amplitude anomalies in the same productive intervals as these fields. Several control wells and two hundred miles of 2-D seismic were used to map Kenai Loop and, similar to the surrounding fields, there are multiple stacked pay zone possibilities between 5,000 and 11,000 feet in the Beluga and Tyonek Formations. The Beluga sands consist of fluvial channels oriented in a northeast-southwest direction. Such channels in the Beluga & Tyonek formations are productive in the Cannery Loop field.” (Application at 2)

“The Kenai Loop #1 (KL#1) discovery well was completed in May 2011 with 81’ of pay in the 9700’ and 10,000’ Tyonek gas sands. The combined flow rate was 10 MMCFGPD and the AOF was 33 MMCFGPD. KL#1 has been in production at a constant rate of 5MMCFGPD since mid-January 2012 and has produced .6BCFG through the end of May, 2012.” (Application at 2)

“11 AAC 83.356(a) provides that a unit must encompass the minimum area required to include all or a part of one or more reservoir or potential hydrocarbon accumulations. Consequently, Buccaneer proposes that only seven (7) Leases be included in the Kenai Loop Unit at this time to cover the proven productive area of the Tyonek sands and multiple potential hydrocarbon accumulations in the Sterling, Beluga, Tyonek and Hemlock formations.” (Application at 2)

### **III. STATUTORY AND REGULATORY PROVISIONS RELEVANT TO THE APPLICATION.**

The statutory standard for unitization is whether it is necessary or advisable in the public interest:

“To conserve the natural resources of all or a part of an oil or gas pool, field, or like area, the lessees and their representatives may unite with each other, or jointly or separately with others, in collectively adopting or operating under a cooperative or a unit plan of development or operation of the pool, field, or like area, or a part of it, when determined and certified by the commissioner to be necessary or advisable in the public interest.”

AS 38.05.180(p); (emphasis added). The legislature has also identified several aspects of the public interest with regard to the state oil and gas leasing program:

“(a) The legislature finds that

(1) the people of Alaska have an interest in the development of the state's oil and gas resources to



- (A) maximize the economic and physical recovery of the resources;
- (B) maximize competition among parties seeking to explore and develop the resources;
- (C) maximize use of Alaska's human resources in the development of the resources;
- (2) it is in the best interests of the state
  - (A) to encourage an assessment of its oil and gas resources and to allow the maximum flexibility in the methods of issuing leases to
    - (i) recognize the many varied geographical regions of the state and the different costs of exploring for oil and gas in these regions;
    - (ii) minimize the adverse impact of exploration, development, production, and transportation activity; and
  - (B) to offer acreage for oil and gas leases, specifically including
    - (i) state acreage that has been the subject of a best interest finding at annual areawide lease sales; and
    - (ii) land in areas that, under (d) of this section, may be leased without having been included in the leasing program prepared and submitted under (b) of this section.”

AS 38.05.180. Unitization extends the primary term of a lease. Alaska statute 38.05.180(m) provides in relevant part:

“An oil and gas lease shall be automatically extended if and for so long thereafter as oil or gas is produced in paying quantities from the lease or if the lease is committed to a unit approved by the commissioner, and a gas only lease shall be automatically extended if and for so long thereafter as gas is produced in paying quantities from the lease or if the lease is committed to a unit approved by the commissioner.”

DNR has set forth unitization decision criteria in regulation that retain the public interest as the primary criterion:

**“11 AAC 83.303. Criteria.** (a) The commissioner will approve a proposed unit agreement for state oil and gas leases if he makes a written finding that the agreement is necessary or advisable to protect the public interest considering the provisions of AS 38.05.180 (p) and this section. The commissioner will approve a proposed unit agreement upon a written finding that it will

- (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area;

- (2) promote the prevention of economic and physical waste; and
- (3) provide for the protection of all parties of interest, including the state.
- (b) In evaluating the above criteria, the commissioner will consider
  - (1) the environmental costs and benefits of unitized exploration or development;
  - (2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization;
  - (3) prior exploration activities in the proposed unit area;
  - (4) the applicant's plans for exploration or development of the unit area;
  - (5) the economic costs and benefits to the state; and
  - (6) any other relevant factors, including measures to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest.
- (c) The commissioner will consider the criteria in (a) and (b) of this section when evaluating each requested authorization or approval under 11 AAC 83.301 - 11 AAC 83.395, including
  - (1) an approval of a unit agreement;
  - (2) an extension or amendment of a unit agreement;
  - (3) a plan or amendment of a plan of exploration, development or operations;
  - (4) a participating area; or
  - (5) a proposed or revised production or cost allocation formula.”

Potential “hydrocarbon reservoir,” “reservoir,” and “unit” are defined by regulation as follows:

**“11 AAC 83.395. Definitions.**

Unless the context clearly requires a different meaning, in 11 AAC 83.301 - 11 AAC 83.395 and in the applicable unit agreements

....

- (5) "potential hydrocarbon accumulation" means any structural or stratigraphic entrapping mechanism which has been reasonably defined and delineated through geophysical, geological, or other means and which contains one or more intervals, zones,

strata, or formations having the necessary physical characteristics to accumulate and prevent the escape of oil and gas;

(6) "reservoir" means an oil or gas accumulation which has been discovered by drilling and evaluated by testing and which is separate from any other accumulation of oil and gas;

(7) "unit" means a group of leases covering all or part of one or more potential hydrocarbon accumulations, or all or part of one or more adjacent or vertically separate oil or gas reservoirs, which are subject to a unit agreement”.

State regulation also sets out the requirements for acceptable plans of exploration and development in 11 AAC 83.341(a) and 343(a):

**“11 AAC 83.341. Unit plan of exploration.**

(a) Unless a unit plan of development is filed under 11 AAC 83.343, a unit plan of exploration must be filed for approval by the commissioner as an exhibit to the unit agreement under 11 AAC 83.306. The plan must describe the applicant's proposed exploration activities, including the bottom-hole locations and depths of proposed wells, and the estimated date drilling will commence. All exploration operations must be conducted under an approved plan of exploration. The commissioner will approve a unit plan of exploration if it complies with the provisions of 11 AAC 83.303. If the proposed unit plan of exploration is disapproved, the commissioner will, in his discretion, propose modifications which, if accepted by the unit operator, would qualify the plan for approval.”

**“11 AAC 83.343. Unit plan of development.**

(a) A unit plan of development must be filed for approval as an exhibit to the unit agreement if a participating area is proposed for the unit area under 11 AAC 83.351, or when a reservoir has become sufficiently delineated so that a prudent operator would initiate development activities in that reservoir. All development operations must be conducted under an approved plan of development. A unit plan of development must contain sufficient information for the commissioner to determine whether the plan is consistent with the provisions of 11 AAC 83.303. The plan must include a description of the proposed development activities based on data reasonably available at the time the plan is submitted for approval as well as plans for the exploration or delineation of any land in the unit not included in a participating area. The plan must include, to the extent available information exists

(1) long-range proposed development activities for the unit, including plans to delineate all underlying oil or gas reservoirs, bring the reservoirs into production, and maintain and enhance production once established;

(2) plans for the exploration or delineation of any land in the unit not included in a participating area;



(3) details of the proposed operations for at least one year following submission of the plan; and

(4) the surface location of proposed facilities, drill pads, roads, docks, causeways, material sites, base camps, waste disposal sites, water supplies, airstrips, and any other operation or facility necessary for unit operations.”

The DNR Commissioner is responsible for determining whether a proposed allocation of production is appropriate:

**11 AAC 83.371. Allocation of production and costs.**

(a) The proposed or revised division of interest or formula allocating hydrocarbon production and unit operating costs among the leases in the unit area may not take effect until approved by the commissioner in writing. When requested by the commissioner, the lessees or unit operator shall promptly file with the commissioner all data that relates to the proposed or revised division of interests or allocation formula for all leases in the participating area. Before any disapproval of the proposed or revised division of interest or allocation formula, the commissioner will give the working interest and royalty owners reasonable notice and an opportunity to be heard. After the hearing, the commissioner will approve the proposed or revised division of interest or allocation formula as submitted unless the commissioner finds in writing that the formula does not equitably allocate production and costs among the leases.

(b) If there is a separate division of interest or allocation formula among any of the parties holding an interest in the unit that is different from the division of interest or allocation formula approved by the commissioner, the parties to the separate division of interest or allocation formula not approved by the commissioner shall submit a copy of that formula to the commissioner and a statement explaining the reasons for the difference.

**IV. DISCUSSION OF DECISION CRITERIA.**

The primary statutory decision criterion for unitization is whether approval is necessary or advisable in the public interest to conserve oil and gas resources. (AS 38.05.180(p)). Conservation of the natural resources of all or part of an oil or gas pool, field or like area means “maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources.” 11 AAC 83.395(1).

The primary regulatory decision criterion for a unitization application is also the public interest. 11 AAC 83.303(a). The Commissioner will approve a proposed unit if he finds that it necessary and advisable in the public interest and unitization will (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (2) promote the prevention of economic and physical waste; and (3) provide for the protection of all parties of

interest including the state. 11 AAC 83.303(a). In evaluating the 11 AAC 83.303(a) criteria, the Commissioner will consider (1) the environmental costs and benefits of unitized exploration or development; (2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; (3) prior exploration activities in the proposed unit area; (4) the applicant's plans for exploration or development of the unit area; (5) the economic costs and benefits to the state; and (6) any other relevant factors, including measures to mitigate impacts identified above, the commissioner determines necessary or advisable to protect the public interest. 11 AAC 83.303(b).

#### **A. 11 AAC 83.303(b) Decision Considerations**

This section discusses the 11 AAC 83.303(b) factors that should be considered before applying the decision criteria under 11 AAC 83.303(a).

##### **1. 303(b)(1) - Environmental Costs and Benefits**

In response to the public notice of the Application, the Division received several public comments expressing concern for the environment from oil and gas development of the unit area. These include an (1) an objection to issuance of a Temporary Water Use Permit by the State of Alaska Division of Mining Land and Water; (2) adverse effects to the landscape; and (3) the state's reckless encouragement of oil and gas development given ocean acidification, climate change, and global warming.

Any development including oil and gas development will have some impact on the environment. The State oil and gas leases proposed to be included in the unit were issued after public notice that the Division proposed to offer the property for oil and gas lease and after the Division issued a best interest finding that the property was appropriate for oil and gas development. The right to develop property for oil and gas was conveyed by the State at the time of lease issuance, and the right to develop the leases is not dependent on unitization. But unitization can reduce the environmental impact of oil and gas development of multiple leases.

Unitization may provide an environmental benefit by enabling joint development of multiple lessees thereby reducing redundant development. Unitization may reduce the need to drill a well or to build production facilities on every lease overlying common reservoir or closely situated reservoirs. Less development may benefit the environment by reducing surface impacts. It is not apparent from the Application, however, how formation of the KXU would generate significant environmental benefits. Production facilities are already in place. The proposed unit plan is to drill one to three uncharacterized wells at unspecified locations each year over the next five years. The proposal does not set forth enough information to support a conclusion that unitization will generate a significant environmental benefit.

The proposed formation of the unit will not provide a significant joint development benefit of pulling different lessees together in a common development. Buccaneer is the single WIO of the leases in the proposed unit area. Thus Buccaneer does not need to unitize the property in order to effect joint development. Rather the purpose of the Application appears to be extension of the primary terms of the leases. Buccaneer must obtain approval in the plan and permitting process



before it can engage in any on-the-ground operations and environmental concerns will be addressed there.

Buccaneer must obtain the Division approval of a unit plan and obtain permits from various agencies before drilling a well or wells or initiating development activities to produce reservoirs within the unit area. 11 AAC 83.346. But the five year proposed duration of the initial unit plan together with the lack of detail of the proposed operations undercuts the State's ability to manage the unit through the plan process.

Buccaneer will also need to obtain permits from various agencies before drilling a well or wells, or initiating development activities to produce reservoirs within the unit area. 11 AAC 83.346. The potential environmental effects of proposed on-the-ground activities are analyzed in the permitting and plan review processes. This includes consideration terms of State oil and gas leases that are designed to protect the environment, should development occur, and to address concerns regarding potential impact to fish and game, wildlife habitats, and subsistence. Permits have to be obtained before development activity can occur, and they typically set additional conditions designed to protect the environment. Buccaneer will be required to obtain additional approvals before conducting operations on the leases regardless of whether the properties are unitized.

This is not the appropriate forum to challenge issuance of the Temporary Water Use permit. This is the decision of the DNR Division of Oil and Gas regarding unitization of existing State oil and gas leases. The permit was issued by a different DNR division. Objections to the permit need to be directed to the DNR Division of Mining, Land and Water as the permit issuing entity or to the DNR Commissioner who is responsible for deciding appeals from decisions of that DNR division.

## 2. 303(b)(2) – Geological, Geophysical, and Engineering Characteristics

Some of the information and data Buccaneer submitted in support of its 2012 application to form the Kenai Loop Unit is accorded confidentiality protection under AS 38.05.035(a)(8)(C) and 11 AAC 96.220. Confidential information is not disclosed in this decision.

Geologic and geophysical data submitted by Buccaneer in support of the application includes: original 3-D seismic sections and interpretations, seismic amplitude interpretations, mapped seismic horizons, geologic cross sections, well log displays, magnetic maps and interpretations, and regional magnetic, seismic and geologic maps.

The proposed KXU is located on the Kenai Peninsula north of the Cannery Loop Unit. Three exploration wells have been drilled in the proposed KXU area. The Kenai Loop #1, Kenai Loop #3, and Kenai Loop #4 wells were drilled in 2011 and 2012 on land owned by the MHT under lease MHT 9300082, covering 1,080 acres. Regional seismic data indicate that these wells are located on the structural ridge of the Cannery Loop anticline. The Kenai Loop project was mapped by Buccaneer using 200 miles of 2-D seismic data tied to existing wells.

The Kenai Loop #1 well was completed in June 2011 by Buccaneer as a slightly deviated hole to a total depth of 10,680 feet measured depth (MD) on MHT lease 9300082, located in NW ¼ Sec 33, T6N, R11W, Seward Meridian, within Kenai City limits, approximately two miles northeast of the Kenai River mouth. Gas was discovered in the Kenai Loop #1 well within the Tertiary age Kenai Group Upper Tyonek Formation and is currently being produced from the 9,700 feet and 10,000 feet MD zones. The Kenai Loop #1 well had a combined flow rate of 10 million cubic feet per day (MMCFD) and an absolute open flow (AOF) potential of 33 MMCFD. Production data indicates that from January 2012 through November 2012, the Kenai Loop #1 well produced at a nearly constant average daily rate of 5.14 MMCFD, and the well has produced approximately 1.5 billion cubic feet (BCF) as of November 2012. A drainage radius ranging from 0.22 to 0.29 miles (1,170 feet to 1,534 feet) was calculated at the Kenai Loop #1 well bottom hole location, indicating that both MHT lease 9300082 and State lease ADL 391094 are likely being drained.

The Kenai Loop #3 well, drilled based on 2-D seismic mapping to test the Upper Tyonek zones up-dip (south) from Kenai Loop #1, was completed in October 2011 as a deviated hole by Buccaneer to a total depth of 11,368 feet MD on MHT lease 9300082, located in NW ¼ Sec 33, T6N, R11W, Seward Meridian, within Kenai City limits, approximately two miles northeast of the Kenai River mouth. A moderately thicker Tertiary section is present in this well than in the Kenai Loop #1 well. Potential reservoir zones in Kenai Loop #3 well showed high water saturation and did not produce gas, which Buccaneer interprets as reservoir depletion due to production from the Cannery Loop Unit south of Kenai Loop #3 well. Regardless, Kenai Loop #3 was not a productive well.

The Kenai Loop #4 well was completed in fall 2012 by Buccaneer to a total depth of 13,083 feet MD on MHT lease 9300082, located in NW ¼ Sec 33, T6N, R11W, Seward Meridian, within Kenai City limits, approximately two miles northeast of the Kenai River mouth. Buccaneer has not provided the Division with data for this well or indicated that the well encountered hydrocarbons.

In April of 2012 Buccaneer completed a 23.4 square mile 3-D seismic survey covering the leases within the proposed KXU and tying into the existing 3-D data over the Cannery Loop field. Buccaneer has completed an initial interpretation of the new 2012 3-D data which provides the basis of the proposed KXU.

In addition to 3-D mapping of the structure tested by the Kenai Loop #1 and Kenai Loop #3 wells Buccaneer has identified additional Kenai Group potential hydrocarbon accumulations in the Lower Sterling, Upper Tyonek, and Hemlock Formations. All of these prospects are based on amplitude anomalies, which Buccaneer interprets as gas-filled sand reservoirs. But seismic surveys do not necessarily indicate the presence of hydrocarbons, and the amplitude anomalies in these three formations could be caused by lithological factors rather than the presence of gas. For example, the acoustic contrast between siltstones and coals in the Kenai Group commonly causes strong amplitudes. However most of the amplitude anomalies mapped by Buccaneer have some apparent structural control (anticline, flank or fault closure), indicating a possible hydrocarbon trapping mechanism.



Division review of the Kenai Loop 3-D survey shows that there is a producing structure tested by Kenai Loop #1 well, as well as amplitude-based potential hydrocarbon accumulations. The amplitude-based potential hydrocarbon accumulations are high risk, but the geological, geophysical, and engineering analysis demonstrates the existence of both a producing reservoir and potential hydrocarbon accumulations within the operator's proposed Kenai Loop Unit.

### 3. 303(b)(3) – Prior Exploration Activities

Buccaneer licensed and reinterpreted data from six 2-D seismic surveys prior to drilling Kenai Loop #1 well. The 2-D data were acquired between 1974 and 1982 by various companies exploring the area. Prior to Buccaneer drilling the three Kenai Loop wells, the most proximal well was the Cannery Loop Unit #3 well, drilled approximately one mile southwest by Union Oil Company of California (UNOCAL) in 1981. UNOCAL drilled this well on the north side of the northeast plunging anticline over which the Cannery Loop Unit was formed. The Cannery Loop Unit #3 well cumulatively produced nearly 350 MMCF of gas during one year of production in 1988.

### 4. 303(b)(4) - Applicant's Plans for Development of the proposed Kenai Loop Unit

The terms of the proposed Initial POD are:

In the 1<sup>st</sup> Year:

1. "Buccaneer agrees to drill 1-3 additional wells within the 1<sup>st</sup> year. The next well (Kenai Loop No. 4 well) will be drilled to the proposed depth of 11,000 TVD and will attempt to extend the Kenai Loop field from the Kenai Loop No. 1 well. The surface location is on the Kenai Loop No. 1 pad and the final bottom hole location will be determined after final processing and interpretation of the 3D seismic survey.
2. Buccaneer will propose the initial Participating Area for the Tyonek formation to encompass the known producing interval in the Kenai Loop No. 1 Well." (Plan at 5).

In the 2<sup>nd</sup> through 5<sup>th</sup> Year:

"Buccaneer agrees to drill 1-3 wells per year to drill additional wells in the Kenai Loop Unit." (Plan at 5).

Buccaneer's POD does not state where the additional wells will be drilled. The State acreage accounts for 1,397.14 acres (approximately 19%) of the proposed unitized area. Granting unitization would extend the term of the State leases; however there is no specific plan of exploration or development on the State land. There is no commitment to develop State land.

In substance the proposed plan is more like a Plan of Exploration than a Plan of Development. Buccaneer is not committing to the development of a proven reservoir. It is offering to drill wells to look for hydrocarbons. The plan does not provide enough information to meet the requirements of 11 AAC 83.341 on Plans of Exploration or 11 AAC 83.343 on Plans of

Development. The unit plan is therefore inadequate, and the proposed five year duration of the plan without bench marks exposes the State to significant risk that the unit will be granted and leases extended without meaningful development.

#### 5. 303(b)(5) - The Economic Costs and Benefits to the State

DNR has an obligation to protect the public's interest in maximizing economic and physical recovery from the State's oil and gas resources. AS 38.05.180(a)(1)(A). Maximizing economic recovery of hydrocarbons ensures royalty revenues and increased employment opportunities over the long-term. Realization of these potential benefits requires exploration and development of State oil and gas properties. Although Buccaneer has included several one line assertions that it will drill one to three additional uncharacterized wells in unspecified locations each year over the proposed five year plan, no surface or bottom hole locations are specified. And there is no indication of whether or when a well will be drilled on State land. Granting a unit and extending the primary term of the State leases does not maximize the economic or physical recovery from State leases or the public interest if there is no commitment to develop State land.

The State is also required to maximize competition among parties in oil and gas development. AS 38.05.180(a)(1)(B). Without firm development proposals, unitization of the proposed area would not enhance competition or effect development. To the contrary, it would automatically extend the primary term of the leases; deprive other potential lessees of the opportunity to develop the property; and work to reduce competition. The reservoir confirmed by the Kenai Loop #1 well is in production. MHT lease 9300082 is extended by production and State lease ADL 391094 is extended by production until the Division issues a decision on the drainage issue. Extending the term of the other leases proposed to be included in the unit for the purpose of drilling additional exploration wells does not encourage competition to develop State resources. If unitization is denied and these leases expire,<sup>3</sup> Buccaneer or other producers can bid on them at a lease sale and conduct exploration activities during the primary term of the lease. That will do more to encourage development competition than extending the term of the leases by unitization.

#### 6. 303(b)(6) - Other Relevant Factors

Public comments were received expressing concern about Buccaneer's lack of experience, its financial stability, and its alleged shotgun approach to permitting. But Buccaneer is qualified to do business in the State of Alaska and to hold a State oil and gas lease. And it has drilled a successful well in the proposed unit area. Buccaneer is qualified to apply for formation of the KXU unit. But the Application is not consistent with the purpose of unitization.

The purpose of unitization is to effect efficient development of multiple leases overlying a common reservoir or closely situated reservoirs. But, the Application does not specifically outline the exploration or development activities Buccaneer will pursue if unitization is granted. No commitment is made to do any work on State leases. Therefore the Application does not propose efficient development of State land.

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<sup>3</sup> The leases without production (ADL 391091, ADL 391092, and ADL 391095) which have reached the end of their primary term, will expire.



Unitization of the proposed unit area is not necessary to allow for joint development. Buccaneer is the sole Lessee of the proposed unit area. The primary term of the State leases has expired, unitization would extend the lease primary term without a clear plan of development. The purpose of unitization is development, not lease extension to accomplish exploration that should have been conducted during the primary term of the lease.

The Division was notified by CIRC on January 9, 2013, that they had terminated lease C-061667. Buccaneer has neither modified the Application to reflect termination of the CIRC lease nor otherwise communicated with the Division about the CIRC termination. It is not clear whether the proposed unit would include the CIRC lease or not.

The unit plan is deficient because it does not meet the requirement of 11 AAC 83.341 or 11 AAC 83.343 respectively unit Plans of Exploration or Development because only cursory statements are provided essentially proposing to drill three to five wells each year of the five year plan. No well or bottom hole locations are proposed. No additional development targets are identified, and no additional development activities are proposed. The five year term eviscerates the Division's ability to ensure unit development through the plan process.

Over 60% of the acreage proposed for the KXU is MHT leased lands. MHT may issue its own decision on unitization of MHT leases. Section 2(b) of the MHT oil and gas lease states MHT has the authority to extend a lease that is committed to a unit agreement approved or consented to by Lessor.

## **B. 11 AAC 83.303(a) Decision Criteria**

State regulation provides that the DNR Commissioner will approve a unit agreement or unit plan if he finds that it will promote the conservation of natural resources, that it will prevent economic and physical waste, that it will provide for the protection of all parties in interest including the state, and that it is necessary and advisable in the public interest. 11 AAC 83.303(a). This section addresses those decision criteria.

### **1. 303(a)(1) – Promote the Conservation of all Natural Resources**

Alaska statute authorizes the DNR Commissioner to approve an agreement among multiple lessees that hold separate leases overlying a common reservoir to jointly develop the leases for the purpose of conserving the natural resources of all or a part of an oil or gas pool, field, or like area. AS 38.05.180(p). In this context, "conservation" means "maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources." 11 AAC 83.395(9).

Buccaneer has shown that a productive reservoir was penetrated by Kenai Loop #1 well within the proposed unit area. Division review of the Kenai Loop 3-D survey also shows amplitude based anomalies that could indicate additional potential hydrocarbon accumulations. But the Kenai Loop #3 well shows that another portion of the proposed unit is not underlain by



hydrocarbons. Buccaneer has not provided the State with any data from Kenai Loop #4 well or indicated to the State that this well completed in 2012, encountered hydrocarbons. While the seismic testing suggests the proposed unit area might include additional hydrocarbons, such testing does not confirm the presence of hydrocarbons. Buccaneer has not shown that the entire proposed unit area has been proven productive, but it has shown a proven producible formation penetrated by Kenai Loop #1 well and that the proposed unit contains other possible potential hydrocarbon trapping mechanisms.

Still, the Application contains no commitments for new development of or new production from the proposed unit area. Buccaneer plans on applying for a PA on the reservoir being produced by Kenai Loop #1 well, but otherwise the plan proposes that one to three wells will be drilled a year over a five year period. The Application includes no information on well location or additional development activities, and it does not show that unitization would affect efficient recovery of oil or gas. All of the wells in the proposed unit area were drilled on MHT lands. The Application contains no commitment to explore, develop, or produce State land. The Application does not set out a detailed development plan or contain meaningful commitments for new production or development in return for lease extension through unitization.

The unitization of oil and gas reservoirs or accumulations and the formation of unit areas to develop hydrocarbon-bearing reservoirs or accumulations may work to conserve the reservoir when leases overlying a common reservoir are owned by different parties. Diligent exploration and development under a single approved unit plan without the complications of competing leasehold interests promotes the State's interest. But in this case, the proposed KXU leases have a single lessee, Buccaneer. There are no complicating factors from competing leaseholder interests that prevent Buccaneer from diligently exploring and developing the proposed KXU area and adjoining leases. Unitization is not necessary to reconcile the competing interests of multiple lessees in the proposed unit area to avoid excessive or redundant development. The Application also fails to provide for joint development of multiple leases.

The Application does not propose activities that would be conducted differently under unitization than they would be on an individual lease basis. No coherent exploration or development plan is offered. Instead, Buccaneer simply asserts that it will drill one to three wells a year. The primary purpose of the Application appears to be extension of the primary terms of the State leases proposed to be included in the unit and not to effect efficient development of proven reservoirs. That is not the purpose of unitization.

## 2. 303(a)(2) - Prevention of Economic and Physical Waste

Unitization, as opposed to activity on a lease-by-lease basis, may prevent economic and physical waste by preventing the drilling of wells in excess of the number necessary for the efficient recovery of hydrocarbons or drilling in a manner that results in the improper use of or unnecessary dissipation of reservoir energy through adoption of a unified reservoir management plan. And unitization may otherwise reduce redundant expenditures. But the Application does not show how unitization would produce these benefits. It does not show that unitization would result in coherent and efficient development of and production from the unit area through unified reservoir management plan. The Application simply asserts that one to three wells will be drilled



in each of the five years of the initial plan. Buccaneer is the sole working interest owner of the leases proposed for unitization, and it is not necessary to unitize the leases to achieve coordinated development. The primary purpose of the Application appears to be lease extension not efficient development.

3. 303(a)(3) - Protection of all Parties of Interest, including the State

Unit formation would protect the interests of Buccaneer by extending the term of the leases. But this would not necessarily protect the State's interest. If unitization is granted for the proposed area, Buccaneer will continue to hold State acreage with no firm commitment to develop any of it for at least a five year period and potentially a much longer period. If unitization is not granted, the State leases will expire, with the exception of the ADL 391094. That lease will be held by production from the Kenai Loop #1 well until such a time as the Division can issue a decision on the drainage issue. Allowing the remaining State leases to return to the State gives Buccaneer and potential new lessees an opportunity to bid on them at a lease sale thereby protecting the State's interest by encouraging competition.

State oil and gas leases are issued for a fixed term of five to ten years after which they come back to the State to be reoffered for bid unless they are in production or certain other limited conditions are met to extend the lease term. Unitization is one of the conditions that allow a lessee to hold a lease beyond its primary term. AS 38.05.180(m). But the purpose of unitization is to effect efficient production and to minimize adverse impacts of oil and gas development. 11 AAC 83.395(1). While exploration can be done after a lease is committed to a unit, lease exploration is more properly an activity that should occur during the primary term of a lease. Unitization is primarily intended to enable development of multiple lessees overlying a common reservoir that was discovered during the primary term of the lease. The State leases proposed for unitization have a term of five years. Buccaneer knew, or should have known, what the primary term was when it acquired the leases. It is not in the public interest to extend leases beyond their primary term to simply drill exploration wells in the absence of firm development and production commitments.

The proposed plan does not protect the State interest. No detail of exploration or development activities is provided other than the assertion that one to three wells will be drilled a year. The five year duration of the plan hinders the State's ability to ensure unit development through the plan process.

4. 303(a) – Necessary and Advisable in the Public Interest

The people of Alaska have an interest in the development of the State's oil and gas resources to maximize the economic and physical recovery of the resources and in maximizing competition to develop State resources. AS 38.05.180(a). The Application makes no showing that unitization would work to maximize economic or physical recovery from the area or would enhance competition. The Application contains no commitment to increase production or to do additional development in the unit area. Simply extending leases beyond their primary term in the absence of development commitments does not result in realization of the purposes of unitization or the

State oil and gas leasing program. Approval of the Application is not necessary or advisable in the public interest. The Application does not promote the public interest.

## **V. FINDINGS AND DECISION.**

### **1. Findings**

1. The Application does not show how unitization would provide significant environment costs or benefits.
2. Buccaneer is the sole working interest owner so it is not necessary to unitize in order to obtain coordinated development of the leases proposed to be included in the unit.
3. The primary purpose of the Application appears to be lease extension and not efficient development of the unit area.
4. Lease extension with no production or development commitments ensures that the lack of competition for development of the leases to be included in the unit will continue.
5. The Application does not maximize development of State resources as locations are not given for the wells proposed.
6. Exploration may be a component of unit activity but the primary purpose of unitization is development of reserves proven during the primary term of a lease and the Application makes no development commitments.
7. Buccaneer is the sole working interest owner, therefore it is in their best interest to prevent physical waste through proper and efficient management of reservoir energy, regardless if the area is unitized or is being developed on a lease-by-lease basis.
8. Buccaneer is the sole lessee of the proposed unit area, and unitization is not necessary to protect multiple lessees overlying a common reservoir.
9. The only interest that would be protected through grant of the Application is Buccaneer's interest in continuing to retain the State leases beyond their primary term.
10. Granting the Application would not protect the State's interest in developing the State's oil and gas resources to maximize the economic and physical recovery.
11. The plan does not provide sufficient information to meet the requirements of 11 AAC 83.341 or 11 AAC 83.343, and the five year duration of the plan without milestones, undercuts the State's ability to manage the unit.

### **2. Decision**

It is not necessary or advisable in the State's or the public's interest to grant the Application. The Application, as submitted, does not further the purposes of unitization or the public interest in oil and gas leasing. Formation of the unit protects Buccaneer's interest, but not the State's interest. The purpose of unitization is to effect efficient development and production of multiple State leases especially where they are owned by multiple lessees. It is not to indefinitely hold State leases beyond their primary term for the purpose of drilling exploration wells.

The Application to form the Kenai Loop Unit is denied because it does not serve to protect the State or public interest.



This decision denies Buccaneer's Application with regard to State leases. It does not affect the authority of the MHT or CIRI to unitize their leases. The MHT leases that Buccaneer proposes to include provide that the MHT makes management decisions regarding them. Notwithstanding this Decision denying unitization of State leases, MHT and CIRI could exercise their discretion to unitize their leases.

The Division will issue a separate decision extending the primary term for ADL 391094 under the extension by production provision in the lease (Lease Term 4) until the Division issues a decision on the issue of drainage of the State lease by Kenai Loop #1 well.

A person affected by this decision may appeal it, in accordance with 11 AAC 02.010 through 11 AAC 02.900. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040 (c) and (d), and may be mailed or delivered to Daniel S. Sullivan, Commissioner, DNR, 550 W. 7<sup>th</sup> Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to (907) 269-8918, or sent by electronic mail to [dnr.appeals@alaska.gov](mailto:dnr.appeals@alaska.gov). This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02.010 through 11 AAC 02.900 before appealing this decision to Superior Court. A copy of 11 AAC 02.010 through 11 AAC 02.900 may be obtained from any regional information office of the Department of Natural Resources.



W.C. Barron  
Director  
Division of Oil and Gas

3/27  
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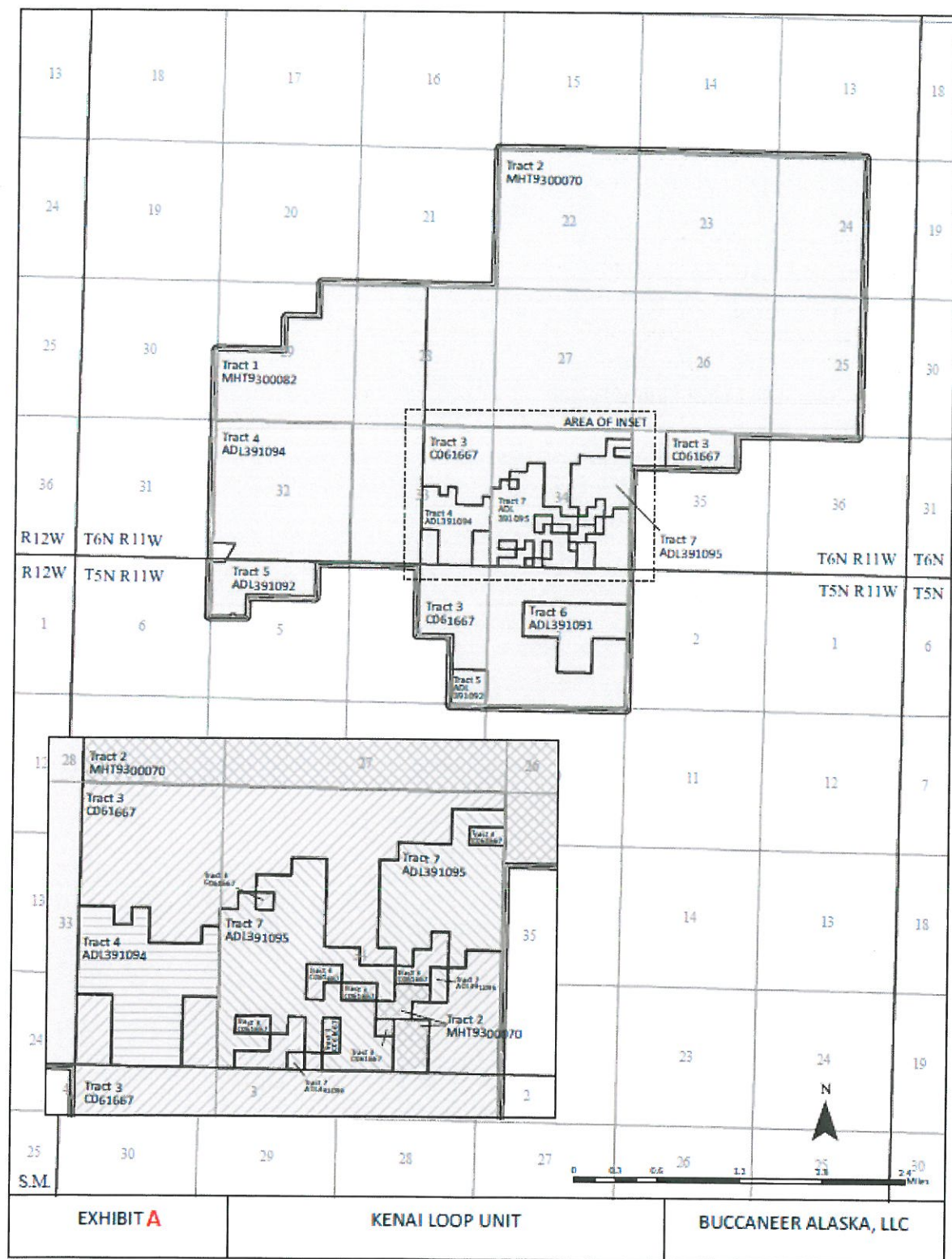
Date

## ATTACHMENTS

- 1) Proposed Kenai Loop Unit – Proposed Exhibit A Map of Proposed Unit Area (July 19, 2012)
- 2) Proposed Kenai Loop Unit – Proposed Exhibit B Leases Proposed in Unit Area (July 19, 2012)

# ATTACHMENT ONE: Exhibit A

Proposed Kenai Loop Unit – Exhibit A: Map of Proposed Unit Area (July 19, 2012)



# ATTACHMENT TWO: Exhibit B

Proposed Kenai Loop Unit – Exhibit B: Requested Leases to Form Unit Area (July 19, 2012)

Exhibit "B"

Attached to that certain Kenai Loop Unit Agreement

Tract No.	Lease No.	Effective Date	Legal Description	Acres	Royalty Owner Percentage	Lessee of Record	Working Interest	ORRI Owners	ORRI Percentage	
1	MHTS300082	2/1/11	T. 006 N., R. 011 W., Seward Meridian, AK							
			Section 28: W1/2;	320.00	Mental Health Trust	Buccaneer Alaska, LLC	100.00%	Buccaneer Royalties, LLC	3.50000%	
			Section 29: E1/2NE1/4, SW1/4NE1/4;	120.00	12.5%			Mark R. Landt	0.70000%	
			Section 29: SE1/4;	160.00				Strong Energy Resources, LLC	0.70000%	
			Section 29: SW1/4;	160.00				William Allen Huckabay	0.70000%	
			Section 33: W1/2;	320.00				David J. Doherty	0.30000%	
			TOTAL	1040.00				Craig Moore	0.30000%	
2	MHTS300070	1/1/11	T. 006 N., R. 011 W., Seward Meridian, AK							
			Section 27: S1/2SE1/4;	60.00	Mental Health Trust	Buccaneer Alaska, LLC	100.00%	Bang Energy, LLC	0.15000%	
			According to the survey plat accepted by the United States Department of the Interior, General Land Office in Washington, D.C. on May 6, 1954.							6.50000%
			Section 34: Lot 151;	2.50						
			Section 34: Lot 152;	2.50						
			Section 34: Lot 153;	2.50						
			Section 34: Lot 154;	2.50						
			Section 34: Lot 155;	2.50						
			Section 34: Lot 156;	2.50						
			Section 34: Lot 177;	2.50						
			Section 34: Lot 178;	2.50						
			Section 35: NW1/4NW1/4;	40.00						
			Section 34: Lot 123;	2.50						
			Section 34: Lot 124;	2.50						
			Section 34: Lot 130;	2.50						
			Section 34: Lot 131;	2.50						
			Section 34: Lot 155;	2.50						
			According to the survey plat accepted by the United States Department of the Interior, Bureau of Land Management in Washington, D.C. on June 24, 1954.							
			Section 22: All;	640.00						
			Section 23: All;	640.00						
			Section 24: W1/2, W1/2W1/2E1/2;	400.00						
			Section 25: W1/2, W1/2W1/2E1/2;	400.00						
			Section 26: All;	640.00						
			Section 27: N1/2, SW1/4, N1/2SE1/4;	560.00						
			Section 28: E1/2;	320.00						
According to the survey map examined and approved by the U.S. Surveyor General's office in Juneau, Alaska, on March 16, 1922, and the survey plat accepted by the United States Department of the Interior, General Land Office in Washington, D.C. on May 6, 1941, and the survey plat accepted by the United States Department of the Interior, Bureau of Land Management in Washington, D.C. on June 26, 1957.				TOTAL					3747.50	

According to the survey map examined and approved by the U.S. Surveyor General's office in Juneau, Alaska, on March 18, 1922, and the survey plat accepted by the United States Department of the Interior, General Land Office in Washington, D.C. on May 6, 1941, and the survey plat accepted by the United States Department of the Interior, Bureau of Land Management in Washington, D.C. on June 26, 1957.



**Exhibit "B"**  
Attached to that certain Kenai Loop Unit Agreement

Tract No.	Lease No.	Effective Date	Legal Description	Acres	Royalty Owner Percentage	Lessee of Record	Working Interest	ORRI Owners	ORRI Percentage
3	C-061667	3/1/11	Geward Meridian, Alaska						
			T. 5N., R. 11 W.	680	CIRI 20.0%	Buccaneer Alaska, LLC	100.00%	Buccaneer Royalties, LLC	3.50000%
			Section 3: Lots 1 to 4, inclusive, SW1/4NW1/4, SW1/4, NE1/4SE1/4, S1/2SE1/4						
			Section 4: Lots 1 and 2, S1/2NE1/4, NE1/4SE1/4						
			T. 6N., R. 11 W.	595					
4	ADL-331094	10/1/07	Section 33: Lots 1, 2, 3, 4, 7, 10, 11, and 12, N1/2NE1/4, SE1/4NE1/4, N1/2SW1/4NE1/4, W1/2SW1/4SE1/4, E1/2SE1/4SE1/4						
			Section 34: Lots 1, 2, 3, 4, 5, 9, 10, 12, 13, 14, 37, 39, 54, 56, 72, 76, 93, 94, 96, 97, 99, 100, 101, 103, 104, 106, 109, 118, 120, 121, 126, 127, 128, 129, 142, 143, 145, 147, 150, 153, 154, 160, 162, 163, 166, 169, 170, and 172; N1/2NW1/4NE1/4, N1/2S1/2NW1/4NE1/4, W1/2W1/2SW1/4NE1/4, N1/2NW1/4, NW1/4SW1/4NW1/4, E1/2SE1/4NW1/4, N1/2NE1/4NE1/4SW1/4, SE1/4NE1/4SE1/4, NE1/4SE1/4SE1/4, S1/2SE1/4SE1/4						
			Section 35: NW1/4NE1/4, NE1/4NW1/4	TOTAL	1275				
			T. 6 N., R. 11 W., Geward Meridian, Alaska						
			Section 32, Surveyed, All excluding U.S. Survey 4969; 630.27 Acres	630.37	State of Alaska 12.5%	Buccaneer Alaska, LLC	100.00%	Stellar Oil & Gas, LLC	3.00000%
			Section 33, Surveyed, Lots 5, 6, 8, 9, 13 thru 40, W1/2SE1/4SE1/4, E1/2SW1/4SE1/4;	120.00				Buccaneer Royalties, LLC Daniel K. Donkel Coby Dowling Walter Fuller J. Benjamin Johnson Dean R. Kennedy John M. Martinek Hayden McIlroy Bill Stapleton Total ORRI	3.50000% 0.30000% 0.60000% 0.60000% 0.57500% 0.60000% 0.57500% 0.75000% 0.60000% 11.00000%
			TOTAL	750.37					
5	ADL-331092	10/1/07	T. 5 N., R. 11 W., Geward Meridian, Alaska						
			Section 4, Surveyed, SE1/4SE1/4;	40.00	State of Alaska 12.5%	Buccaneer Alaska, LLC	100.00%	Stellar Oil & Gas, LLC	3.00000%
			Section 5, Surveyed, Fractional, Lots 2, 3, 4A, 13, N1/2SW1/4NW1/4, N1/2N1/2SW1/4SW1/4NW1/4;	143.60				Buccaneer Royalties, LLC Daniel K. Donkel Coby Dowling Walter Fuller J. Benjamin Johnson Dean R. Kennedy John M. Martinek Hayden McIlroy Bill Stapleton Total ORRI	3.50000% 0.30000% 0.50000% 0.60000% 0.57500% 0.60000% 0.57500% 0.75000% 0.60000% 11.00000%
			Special Surveys	3.17					
			U.S. Survey 3025 A and B, Block 6 Lots 1 and 5;	186.77					
TOTAL				317					



**Exhibit "B"**  
Attached to that certain Kenai Loop Unit Agreement

<u>Tract No.</u>	<u>Lease No.</u>	<u>Effective Date</u>	<u>Legal Description</u>	<u>Acres</u>	<u>Royalty Owner Percentage</u>	<u>Lessee of Record</u>	<u>Working Interest</u>	<u>ORRI Owners</u>	<u>ORRI Percentage</u>
6	ADL-391091	10/1/07	T. 5 N., R. 11 W., Seward Meridian, Alaska Section 3, Surveyed, S1/2NE1/4, NW1/4SE1/4, SE1/4NW1/4;	160	State of Alaska 12.5%	Buccaneer Alaska, LLC	100.00%	Stellar Oil & Gas, LLC Buccaneer Royalties, LLC Daniel K. Donkel Coby Dowling Walter Fuller J. Benjamin Johnson Dean R. Kennedy John M. Martinek Hayden McIlroy Bill Stapleton Total ORRI	3.00000% 3.50000% 0.30000% 0.50000% 0.60000% 0.57500% 0.60000% 0.57500% 0.75000% 0.60000% 11.00000%
			TOTAL	160					
7	ADL-391095	10/1/07	T. 6 N., R. 11 W., Seward Meridian, Alaska Section 34, Surveyed Lots 6 thru 8, 11, 15 thru 35, 39 thru 53, 55, 57 thru 71, 73 thru 75, 77 thru 92, 95, 98, 102, 105 thru 107, 110 thru 117, 119, 122, 125, 132 thru 141, 144, 146, 148, 149, 157 thru 159, 161, 164 thru 167, 171, 173 thru 176;	300	State of Alaska 12.5%	Buccaneer Alaska, LLC	100.00%	Stellar Oil & Gas, LLC Buccaneer Royalties, LLC Daniel K. Donkel Coby Dowling Walter Fuller J. Benjamin Johnson Dean R. Kennedy John M. Martinek Hayden McIlroy Bill Stapleton Total ORRI	3.00000% 3.50000% 0.30000% 0.50000% 0.60000% 0.57500% 0.60000% 0.57500% 0.75000% 0.60000% 11.00000%
			Total Acres	7499.64					
			State of Alaska The Mental Health Trust Authority Cook Inlet Region, Inc.	18.62943% 64.35976% 17.50082% 100.00000%					